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IN THE CLAIMS:

1-22 (canceled)

23. (currently amended) ~~The computer program of Claim 22, wherein, A computer program for an inspection area computer processor of an inspection system, said computer program comprising:~~

(a) a computer useable medium having computer readable program code means embodied in said medium for causing the inspection area computer processor to perform the steps of:

- locating within electronic data, which has a two-dimensional image of a fully or partially assembled device encoded within it, predetermined locating features of two or more inspection components of the device;
- calculating relative positions or orientations of the two or more inspection components of the device;
- calculating one or more position errors or orientation errors between the inspection components of the device by subtracting from the calculated relative positions or orientations of the inspection components preferred relative positions or orientations of the inspection components;
- causing one or more of the calculated relative positions, calculated relative orientations, positions errors, or orientation errors to be displayed upon an inspection area computer display screen to which the inspection area computer processor is communicatively linked;

(b)-(a) said step of locating two or more predetermined locating features of the inspection components more specifically comprises the steps of:

- locating within electronic data, which has a two-dimensional image of a fully or partially assembled chassis of a vehicle encoded within it, center points of ends of an axle which is part of the chassis; and

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- locating within the electronic data, which has a two-dimensional image of a fully or partially assembled chassis encoded within it, outer edges of frame rails of the chassis;

(c) (b) said step of calculating relative positions or and/or orientations of the two or more inspection components of the device more specifically comprises the steps of:

- calculating an orientation of an axle centerline which is defined as being the line that passes through the center points of the ends of the axle;
- calculating an orientation of a frame ladder centerline, which is a centerline of a frame ladder of the chassis, by fitting a line to points that are equidistant from the outer edges of the frame rails of the chassis;
- calculating an angle between said axle centerline and said frame ladder centerline;

(d) (e) said step of calculating one or more position errors or and/or orientation errors between the inspection components of the device more specifically comprises the step of:

- calculating an orientation error of said axle centerline relative to said frame ladder centerline by subtracting from the angle between the axle centerline and the frame ladder centerline 90 degrees, which is a preferred orientation of the axle centerline relative to the frame ladder centerline; and

(e) (d)-said step of causing one or more of the calculated relative positions, calculated relative orientations, positions errors, or and/or orientation errors to be displayed upon an inspection area computer display screen, to which the inspection area computer processor is communicatively linked, more specifically comprises the step of:

- causing the angle between the axle centerline and the frame ladder centerline or and/or the orientation error of the axle centerline relative to the frame ladder centerline to be displayed upon an inspection area computer display screen

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to which the inspection area computer processor is communicatively linked.

24. (currently amended) ~~The computer program of Claim 20, wherein:~~ A computer program for an inspection area computer processor of an inspection system, said computer program comprising:

(a) a computer useable medium having computer readable program code means embodied in said medium for causing the inspection area computer processor to perform the steps of:

- locating within electronic data, which has a two-dimensional image of a fully or partially assembled device encoded within it, predetermined locating features of two or more inspection components of the device;
- calculating relative positions or orientations of the two or more inspection components of the device;

(b) (a) said step of locating two or more predetermined locating features of the inspection components more specifically comprises the steps of:

- locating within electronic data, which has a two-dimensional image of a fully or partially assembled chassis of a vehicle encoded within it, center points of ends of an axle which is part of the chassis; and
- locating within the electronic data, which has a two-dimensional image of a fully or partially assembled chassis encoded within it, outer edges of frame rails of the chassis; and

(c) (b) said step of calculating relative positions or and/or orientations of the two or more inspection components of the device more specifically comprises the steps of:

- calculating an orientation of an axle centerline which is defined as being the line that passes through the center points of the ends of the axle;

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- calculating an orientation of a frame ladder centerline, which is a centerline of a frame ladder of the chassis, by fitting a line to points that are equidistant from the outer edges of the frame rails of the chassis; and
- calculating an angle between said axle centerline and said frame ladder centerline.

25-26 (canceled)

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27. (currently amended) ~~The computer program of Claim 26, wherein:~~ A computer program for an inspection area computer processor of an Inspection system, said computer program comprising:

(a) a computer useable medium having computer readable program code means embodied in said medium for causing the inspection area computer processor to rapidly and sequentially repeat the steps of:

- locating within electronic data, which has a two-dimensional image of a fully or partially assembled device encoded within it, predetermined locating features of two or more inspection components of the device;
- calculating relative positions or relative orientations between the two or more inspection components of the device;
- causing one or more calculated relative positions or calculated relative orientations of the inspection components to be displayed upon an inspection area computer display screen to which the inspection area computer processor is communicatively linked;

(b) said computer program causes the inspection area computer processor to repeat said sequentially and repeatedly executed steps multiple times per minute;

(c) (a) said step of locating two or more predetermined locating features of the inspection components more specifically comprises the steps of:

- locating within electronic data, which has a two-dimensional image of a fully or partially assembled chassis of a vehicle encoded within it, center points of ends of an axle which is part of the chassis; and
- locating within the electronic data, which has a two-dimensional image of a fully or partially assembled chassis encoded within it, outer edges of frame rails of the chassis;

(d) (b) said step of calculating relative positions or and/or orientations of the two or more inspection components of the device more specifically comprises the steps of:

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- calculating an orientation of an axle centerline which is defined as being the line that passes through the center points of the ends of the axle;
- calculating a position and orientation of a frame ladder centerline, which is a centerline of a frame ladder of the chassis, by fitting a line to points that are equidistant from the outer edges of the frame rails of the chassis;
- calculating an angle between said axle centerline and said frame ladder centerline; and

(e) (e) said step of causing one or more of the calculated relative positions or and/or calculated relative orientations to be displayed upon an inspection area computer display screen, to which the inspection area computer processor is communicatively linked, more specifically comprises the step of:

- causing the angle between the axle centerline and the frame ladder centerline to be displayed upon an inspection area computer display screen to which the inspection area computer processor is communicatively linked.

28-29 (canceled)

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30. (currently amended) The computer program of Claim 29, wherein: A computer program for an inspection area computer processor of an inspection system, said computer program comprising:

(a) a computer useable medium having computer readable program code means embodied in said medium for causing the inspection area computer processor to rapidly and sequentially repeat the steps of:

- locating within electronic data, which has a two-dimensional image of a fully or partially assembled device encoded within it, predetermined locating features of two or more inspection components of the device;
- calculating one or more relative positions or relative orientations of the two or more inspection components of the device;
- calculating one or more orientation errors or position errors of the inspection components of the device by subtracting from calculated relative positions or calculated relative orientations preferred relative positions or preferred relative orientations; and
- causing one or more calculated relative positions, calculated relative orientations, calculated position errors, or calculated orientation errors of the inspection components of the device to be displayed upon an inspection area computer display screen to which the inspection area computer processor is communicatively linked;

(b) said computer program causes the inspection area computer processor to repeat said sequentially and repeatedly executed steps multiple times per minute;

(c) (a) said step of locating two or more predetermined locating features of the inspection components more specifically comprises the steps of:

- locating within electronic data, which has a two-dimensional image of a fully or partially assembled chassis of a vehicle

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encoded within it, center points of ends of an axle which is part of the chassis; and

- locating within the electronic data, which has a two-dimensional image of a fully or partially assembled chassis encoded within it, outer edges of frame rails of the chassis;

(d) (b) said step of calculating relative positions or orientations of the two or more inspection components of the device more specifically comprises the steps of:

- calculating an orientation of an axle centerline which is defined as being the line that passes through the center points of the ends of the axle;
- calculating an orientation of a frame ladder centerline, which is a centerline of a frame ladder of the chassis, by fitting a line to points that are equidistant from the outer edges of the frame rails of the chassis;
- calculating an angle between said axle centerline and said frame ladder centerline;

(e) (c) said step of calculating one or more position errors or and/or orientation errors between the inspection components of the device more specifically comprises the step of:

- calculating an orientation error of said axle centerline relative to said frame ladder centerline by subtracting from the angle between the axle centerline and the frame ladder centerline 90 degrees, which is a preferred orientation of the axle centerline relative to the frame ladder centerline; and

(f) (d) said step of causing one or more of the calculated relative positions, calculated relative orientations, positions errors, or and/or orientation errors to be displayed upon an inspection area computer display screen, to which the inspection area computer processor is communicatively linked, more specifically comprises the step of:

- causing the angle between the axle centerline and the frame ladder centerline or and/or the orientation error of the axle centerline relative to the frame ladder centerline to be

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displayed upon an inspection area computer display screen  
to which the inspection area computer processor is  
communicatively linked.

31-33 (canceled)

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34. (currently amended) The computer program of Claim 33, wherein: A computer program for an inspection area computer processor of an inspection system, said computer program comprising:

(a) a computer useable medium having computer readable program code means embodied in said medium for causing the inspection area computer processor to perform the steps of:

- locating within electronic data, which has a two-dimensional image of a fully or partially assembled device encoded within it, predetermined locating features of two or more inspection components of the device;
- calculating relative positions or orientations of the two or more inspection components of the device;

(b) said computer program further causes the inspection area computer processor to perform the step of:

- causing a computer printer, which is communicatively linked to the inspection area computer processor, to print the calculated relative positions or the calculated relative orientations of the inspection components;

(c) said computer program further causes said inspection area computer processor to perform the step of:

- causing the computer printer that is communicatively linked to the inspection area computer processor to print a unique identifier for the device in a manner such that the printed unique identifier is associated with the printed calculated relative positions or printed calculated relative orientations;

(d) said computer program further causes said inspection area computer processor to perform the steps of:

- when an individual scans a bar code symbol, which is affixed to the device and which has the unique identifier for the device encoded within it, receiving the unique identifier for the device from a bar code scanner that is communicatively linked to the

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inspection area computer processor and that the individual has used to scan the bar code symbol affixed to the device; and

- storing the unique identifier received from the bar code scanner at least temporarily in computer memory so that the unique identifier is available to the inspection area computer processor for said step of causing the computer printer to print the unique identifier;

(e) (a) said step of locating two or more predetermined locating features of the inspection components more specifically comprises the steps of:

- locating within electronic data, which has a two-dimensional image of a fully or partially assembled chassis of a vehicle encoded within it, center points of ends of an axle which is part of the chassis; and
- locating within the electronic data, which has a two-dimensional image of a fully or partially assembled chassis encoded within it, outer edges of frame rails of the chassis;

(f) (b) said step of calculating relative positions or and/or orientations of the two or more inspection components of the device more specifically comprises the steps of:

- calculating an orientation of an axle centerline which is defined as being the line that passes through the center points of the ends of the axle;
- calculating an orientation of a frame ladder centerline, which is a centerline of a frame ladder of the chassis, by fitting a line to points that are equidistant from the outer edges of the frame rails of the chassis;
- calculating an angle between said axle centerline and said frame ladder centerline;

(g) (c) said step of causing a computer printer, which is communicatively linked to the inspection area computer processor, to print the calculated relative positions or and/or the calculated relative orientations of the inspection components more specifically comprises the step of:

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- causing the computer printer that is communicatively linked to the inspection area computer processor to print the angle between the axle centerline and the frame ladder centerline.

35-37 (canceled)

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38. (currently amended) The computer program of Claim 33, wherein: A computer program for an inspection area computer processor of an inspection system, said computer program comprising:

(a) a computer useable medium having computer readable program code means embodied in said medium for causing the inspection area computer processor to perform the steps of:

- locating within electronic data, which has a two-dimensional image of a fully or partially assembled device encoded within it, predetermined locating features of two or more inspection components of the device;
- calculating relative positions or orientations of the two or more inspection components of the device;

(b) said computer program further causes the inspection area computer processor to perform the step of:

- causing a computer printer, which is communicatively linked to the inspection area computer processor, to print the calculated relative positions or the calculated relative orientations of the inspection components;

(c) said computer program further causes said inspection area computer processor to perform the step of:

- causing the computer printer that is communicatively linked to the inspection area computer processor to print a unique identifier for the device in a manner such that the printed unique identifier is associated with the printed calculated relative positions or printed calculated relative orientations;

(d) said computer program further causes said inspection area computer processor to perform the steps of:

- when an individual scans a bar code symbol, which is affixed to the device and which has the unique identifier for the device encoded within it, receiving the unique identifier for the device from a bar code scanner that is communicatively linked to the

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inspection area computer processor and that the individual has used to scan the bar code symbol affixed to the device; and

- storing the unique identifier received from the bar code scanner at least temporarily in computer memory so that the unique identifier is available to the inspection area computer processor for said step of causing the computer printer to print the unique identifier;

(e) (a) said step of locating two or more predetermined locating features of the inspection components more specifically comprises the steps of:

- locating within electronic data, which has a two-dimensional image of a fully or partially assembled chassis of a vehicle encoded within it, center points of ends of an axle which is part of the chassis; and
- locating within the electronic data, which has a two-dimensional image of a fully or partially assembled chassis encoded within it, outer edges of frame rails of the chassis;

(f) (b) said step of calculating relative positions or and/or orientations of the two or more inspection components of the device more specifically comprises the steps of:

- calculating an orientation of an axle centerline which is defined as being the line that passes through the center points of the ends of the axle;
- calculating an orientation of a frame ladder centerline, which is a centerline of a frame ladder of the chassis, by fitting a line to points that are equidistant from the outer edges of the frame rails of the chassis;
- calculating an angle between said axle centerline and said frame ladder centerline;

(g) (c) said step of storing the calculated relative positions or and/or the calculated relative orientations of the inspection components in computer memory more specifically comprises the step of:

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- storing the angle between the axle centerline and the frame ladder centerline in computer memory.

39-47 (canceled)

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48. (original) An inspection system for facilitating inspection of a fully or partially assembled vehicle, which includes a frame ladder with frame rails that have outer edges and an axle which has center points of its ends, by generating electronic data that has a two-dimensional image of the fully or partially assembled vehicle, said inspection system comprising:

- (a) an inspection area within which the device may be positioned;
- (b) one or more inspection cameras stably supported in a position above said inspection area and in an orientation such that a line of site of each of said inspection camera(s) extends from said Inspection camera toward said inspection area;
- (c) an inspection area computer processor that is communicatively linked to said inspection cameras that are digital electronic cameras in such a manner that said inspection area computer processor may receive from said Inspection cameras electronic data that has two-dimensional image(s) of the inspection area encoded within it;
- (d) a computer program embodied in computer readable medium, accessible by said inspection area computer processor, and operable to cause said inspection area computer processor to perform the steps of:
  - locating within electronic data, which has a two-dimensional image of the fully or partially assembled vehicle encoded within it, the center points of the ends of the axle; and
  - locating within the electronic data, which has a two-dimensional image of the fully or partially assembled vehicle encoded within it, the outer edges of the frame rails of the chassis;
  - calculating an orientation of an axle centerline, which is defined as being the line that passes through the center points of the ends of the axle;
  - calculating an orientation of a frame ladder centerline, which is a centerline of a frame ladder of the chassis, by fitting a line to

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points that are equidistant from the outer edges of the frame rails of the chassis; and

- calculating an angle between said axle centerline and said frame ladder centerline.

49. (currently amended) The inspection system of Claim 48, wherein:

(e) (a) said computer program is operable to cause said inspection area computer processor to perform the further step of:

- calculating an orientation error of said axle centerline relative to said frame ladder centerline by subtracting from said angle between said axle centerline and said frame ladder centerline 90 degrees, which is a preferred orientation of said axle centerline relative to said frame ladder centerline, from said angle between said axle centerline and said frame ladder centerline.

50. (currently amended) The inspection system of Claim 49, wherein:

(f) (a) said inspection system further comprises an inspection area computer display screen;

(g) (b) said inspection area computer processor is communicatively linked to said inspection area computer display screen; and

(h) (c) said computer program is operable to cause said inspection area computer processor to perform the further step of:

- causing said angle between said axle centerline or and/or said orientation error between said axle centerline and said frame ladder centerline to be displayed upon said inspection area computer display screen.

51. (currently amended) The inspection system of Claim 48, wherein:

- (e) (a) said inspection system further comprises an inspection area computer display screen;
- (f) (b) said inspection area computer processor is communicatively linked to said inspection area computer display screen; and
- (g) (c) said computer program is operable to cause said inspection area computer processor to perform the further step of:
  - causing said angle between said axle centerline and said frame ladder centerline to be displayed upon said inspection area computer display screen.

52. (currently amended) The inspection system of Claim 48, wherein:

- (e) (a) said computer program is operable to cause said inspection area computer processor to perform the further step of:
  - storing said angle between said axle centerline and said frame ladder centerline to be stored in computer memory.

53. (currently amended) The inspection system of Claim 49, wherein:

- (f) (a) said computer program is operable to cause said inspection area computer processor to perform the further step of:
  - storing said angle between said axle centerline or and/or said orientation error between said axle centerline and said frame ladder centerline in computer memory.

54-62 (canceled)